CLINICAL NOTES ON A CASE OF SYRINGOMYELIA.

FROM THE CLINIC OF PROF. M. ALLEN STARR, COLUMBIA UNIVERSITY.
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The patient, C. O'B., now aged 22, first entered the Vanderbilt Clinic in August, 1896. His case at the time presented the clinical picture of an atrophy of the Aran-Duchenne type. He was then lost sight of, and did not return to the clinic until January 16, 1898, after a lapse of two and a half years, when he presented a most interesting condition.

The family history is mainly negative. The father, who was a painter, died at the age of 52 of some tubercular trouble. His son never knew of his having any lead poisoning. The mother is still alive and in good health. One brother died of phthisis and alcoholism, and one sister died in childhood of causes now unknown. In neither mother's nor father's side of the family could any hereditary factor be found.

The patient had always been a healthy boy; he had had some of the usual children's diseases, measles and whooping-cough, but had lost but little time from school up to his sixteenth year, when he went to work in a printing office. Here his work was largely mechanical, and of late years he has been bearing heavy weights (forms) on his left shoulder, carrying them frequently up three flights of stairs. About the age of 18 or 19, some time after the first symptoms of the disease were noted, he had an attack of what he designated as "fever and ague," but no positive history could be elicited. He is not a drinker, denies syphilis, and has led a comparatively regular life.

His present trouble began three or four years ago, though he is unable to localize the onset with exactness. One of the earliest symptoms noted was a beginning stiffness of the fingers of the left hand. This prevented him from closing the hand as readily as formerly. At the same time he felt some paresthesia of the ulnar side of the left hand and arm, and the muscles of the hand commenced to "dwindle away." Some dull pain was felt in the hand and arm. In addition to this he found that it was harder to keep his fingers warm. Sores formed very readily upon his fingers and healed only after three or four months. He attributed a beginning curvature of the spine to his work of carrying the heavy packages on his left shoulder. At the time of his admission to the clinic in 1896 he had atrophy of the thenar and hypothenar muscles of the left hand, some atrophy of the biceps and triceps of the left arm, and a slight scoliosis with convexity to the left in the dorsal region. Knee-jerk of the left side was increased; pupils reacted normally. Pain-sense was somewhat diminished in the left arm. Temperature-sense was stated in the history to be probably normal, but he is said to have given contradictory replies in his testing. At that time a loss of faradic excitability of the muscles of the left hand was noted. (Dr. Caswell.)

At present the patient is only fairly well nourished; he is unable to attend to work on account of weakness in the left hand and arm and of a beginning stiffness in the right arm. His scoliosis is well marked, and is evidenced by the photograph.

Atrophies.—Both upper extremities are now affected, though the atrophy in the right side is confined to the hand. On each side there is "main en griffe," though this is less typical in the right upper limb. *Left upper extremity.* Complete atrophy and loss of function and of faradic excitability of the interossei and lumbricales, with little or no galvanic response are noted. The muscles of the thenar eminence are atrophied and have lost their faradic excitability. There is slight response to the galvanic current of 20 to 25 ma., but no qualitative changes on the closure contractions. This same condition is present in the muscles of the hypothenar eminence. The extensor and flexor groups of the forearm are markedly atrophied; the flexors more so than the extensors. None of these muscles have lost their faradic excitability to strong currents, though the reaction is diminished and slower. Reaction to galvanism is much diminished, though not qualitatively altered. The supinator longus acts fairly well. The biceps is in fair condition; the triceps is markedly atrophied in all its divisions. The deltoid, trapezius, supraspinatus, infraspinatus and latissimus dorsi are in fair condition. The serratus magnus is atrophied. The electrical reactions in all of these muscles are similar to those noted in the preceding groups. In the right hand a beginning atrophy of the small muscles is seen. At the present time the faradic excitability has not been entirely lost in the small muscles of the right hand, though the reaction is sluggish and is manifest only with comparatively strong currents. There are no atrophies in the legs and no functional disturbances below the waist that the patient appreciates or that examination can reveal. An apparent slight atrophy of the muscles of the left side of the face is detected, but since the skull is somewhat asymmetric this may be more apparent than real. No functional disturbances of the facial muscles have been observed, save that in January, 1898, there was a diminution of the palpebral fissure of the left side. In January, 1899, this is not so apparent, though still present.

The left pupil is slightly myotic. There is no Argyll-

Robertson pupil, and in February, 1898, there were no changes in the fundus. No ocular palsies have been seen. Slight lateral nystagmus is found on extreme lateral movements, especially to the right.

Elbow-jerk and wrist-jerk are completely lost. Some fibrillary twitching of a transient character is seen in the muscles of the left arm and forearm. Chronic constipation is marked, and is probably due to bad hygiene, since no loss of sphincter control exists. No vesical disturbances are present, and the sexual appetite is not altered. Knee-jerks are about normal; that of the left side being perhaps increased. Ankle-clonus is not obtained.

Special sensory symptoms consist of a typical dissociation of sensation. No tactile anesthesia is found anywhere in the body, except in the palms of both hands, as tested with cotton. This does not appear to be unusual in hands which are hardened with hard work, and little stress is, we believe, to be laid upon it. Analgesia to pin pricks, January, 1898, was complete for the whole of the left arm and shoulder, as marked in the photograph taken at the time. In January, 1899, there seems to be a small area sensitive to pain over the biceps muscle. (See Fig. 1.) In January, 1898, the dorsum of the right hand was somewhat analgesic, and this analgesia has become more pronounced throughout the year. In February, 1898, a loss of temperature sense was found over the entire left arm, corresponding to the area of analgesia, but recent tests show that the temperature sense has partially returned over the upper parts of this region, and particularly in the palmar surfaces of the hands.

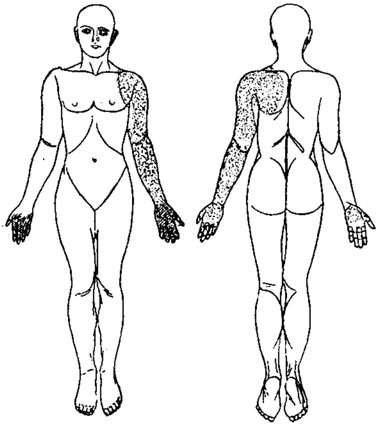

Figure I.—The dotted portions indicate the areas of analgesia and dissociation of sensation; the deeper shading indicates the areas of tactile anesthesia.

Whether this return is due to actual organic repair or is a result of educational discrimination as a result of many successive testings is not manifest. Cold-conduction is slightly better than heat-conduction. At the present time the palmar surface of the left hand is fairly acute in determining heat and cold when grasping the test-tubes. The percentage of correct answers for this locality being now (January, 1899), 18 out of 20 tests. In 1898 less than 50 per cent. of the determinations were correct. The patient has often burned his left hand with matches, and is himself aware of a diminished heat sensibility. There are no areas of anesthesia or of analgesia in the trunk or lower extremities. The muscular sense (weights) is not impaired, and the sense of position of the hands is within normal range. No changes in gait or in the speech are seen. No Romberg sign, and no girdle sensations exist. Mental changes have not been found. The patient states that his memory and other habits of mind are about as they have been for some time.

Trophic disturbances. Both hands are cold and bluish. At times there is a peculiar velvety edema of a slight grade. Ulcers form readily, and heal slowly. During the summer of 1898 the patient wore a plaster jacket for his scoliosis. As a result, he developed pressure ulcers on his shoulders and hips. These are only now healing after a lapse of four months since the removal of the jacket.

59. Du zona au cours de la paralysie générale (Herpes in Genera Paresis). G. Dupan (Gazette Hebdomaire, 1898, p. 853).

In this observation the patient had an ophthalmic zona at least seven months before the beginning of a general paresis. The disease was distinctly developed in ten months and the autopsy showed that the trigeminus was adherent to the dura mater. Thus it would appear that the eruption was due to an irritation of the trigeminal nerves by the meningeal inflammation.

60. A Case of Juvenile General Paralysis. A. Helen Boyle (Journal of Mental Science, 45, 1899, p. 99).

This patient began to show signs of the disease at about the age of fourteen or soon after. Her family history was obscure. Tuberculosis was present in the family, congenital syphilis could not be ruled out entirely, but its only evidence was an irregularity of child births, the first two children dying soon after birth. The symptoms came on decidedly about the time of menstruation and there would seem to be a distinct relationship with this factor. The chief clinical picture was that of a progressive dementia with no delusions and marked involvement of bladder and rectum. The post mortem examination was held to be confirmatory of the diagnosis.